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REMARKS

Claims 2, 9 and 10 were rejected under 35 USC112, first paragraph, with the Examiner stating that

> [T]he system according to claim 2 will never reduce the power in its operation below the initial value, create a dramatic drop of the power when a sequence of failed transmissions is followed by a successful transmission and contradicts the operation of the disclosed system.

Applicants respectfully traverse.

Addressing the above-quoted statement, it is noted that the statement contains three assertions.

The system according to claim 2:

1. will never reduce the power in its operation below the initial value.
2. [will never] create a dramatic drop of the power when a sequence of failed transmissions is followed by a successful transmission.
3. contradicts the operation of the disclosed system.

Regarding assertions 1 and 2, it is quite clear that the Examiner misspoke. A claim stands for what it specifies, and if *claim 2 defines a method* that reduces the operating power below the initial value, then **by definition** that is what a "system according to claim 2" does.

Separately, applicants note that claim 2 does *not* specify a system that reduces power of its operation "below" the initial value, and does not specify a "dramatic" drop. Rather, claim 2 specifies a resetting to the "first power level," and the first power level is the initial power level – not below the initial power level. As for characterizing the size of the drop, claim 2 is wholly devoid of any such characterizing, and only specifies that the power is dropped to its initial "first power level" value. At times the power drop may be slight, and at other times the power drop may be larger.

Perhaps the Examiner meant to opine in assertions 1 and 2 that the specification does not support these particular limitations. That is addressed below.

Regarding assertion 3 (that claim 2 contradicts the specification), it is respectfully submitted that such is not the case. Moreover, such an assertion requires the Examiner to at least explicitly point the specific passages in the specification that support and justify such an assertion (if not also explain further). The Examiner failed to do that. As it stands, applicants are effectively challenged to prove that there is nothing in the

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specification that contradicts claim 2, and proving the negative is effectively impossible – particularly when the Examiner failed to reveal the basis for this assertion. Applicants respectfully request more explicit support and justification for the assertion, should the Examiner choose to maintain this assertion.

Rather than attempt to prove the negative, applicants demonstrate below that claim 2 is, in fact, *supported* by the specification, and this demonstration completely overcomes the rejection, including all three of the above Examiner's assertions.

· Before addressing applicants' affirmative remarks, however, it is appropriate at this point to address the Examiner's comments in the "Response to Arguments" section.

The Examiner asserted that applicants' arguments in the previous Office Action response were not persuasive. Applicants respectfully traverse this assertion as well, because the Examiner's explanation ignores, mischaracterizes and/or misapplies applicants' arguments.

The Examiner stated that applicants' arguments "to derive resetting step from the flow chart of FIG. 7 are not persuasive," but the Examiner has not disputed the fact that, according to FIG. 7, control from step 650 passes to step 610, and step 610 specifies that the system is set to the maximum FER. Any skilled artisan knows that the FER is not a parameter that is set directly. Something else is set that affects the FER, and the step 610 label focuses on the effect. Skilled artisans also know that power control is a primary means for controlling FER, and the instant specification is replete with references to this fact that lowering power increase the FER, and vice versa. Respectfully, it is unreasonable for the Examiner to assert that FIG. 7 does not support the assertion that power is set to an initial value when the FER is reset to the maximum acceptable value.

Further, the Examiner's comments fail to note that a quote from page 1 lines 30 et seq. of the specification that was offered in support of applicants' position that claim 2 is supported in the specification. Apparently the Examiner neglected to consider this showing. That is improper.

Addressing the "support in the specification" issue directly, it is respectfully submitted that sufficient support for the limitation of claim 2 was submitted by applicants in the previous Office Action response.

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> To buttress applicants' argument, however, the Examiner's attention is respectfully directed to the paragraph on page 4, lines 15-25

> The paragraph starts with the sentence:

>> by determining a maximum acceptable FER and a respective minimum power level expected to achieve the maximum acceptable FER a majority of RLC frames can be transmitted using this minimal power level.

This sentence teaches the following:

1. In light of the fact that more errors develop when transmitting power is low, there is some power level that results in an FER that, albeit is high, is acceptable. Thus, this accepted FER is a maximum acceptable FER, and the corresponding power level that yields the maximum acceptable FER is a minimum power level that is used. Any lower power level will result in an unacceptable FER.

2. There is a clear equivalence, or correspondence, between "maximum acceptable FER" and "minimum power level."

3. Since the majority RLC frames can be transmitted using this minimal power level, it follows that should a circumstance arise that modifies the transmission's power to higher level, something else must occur that would allow a _return_ to this minimal power level. Otherwise, the statement that a majority of the RLC frames can be transmitted using this minimal power level could not possibly be true.

Respectfully, this sentence _alone_ supports applicants' argument about FIG. 7, and totally supports the claim 2 limitation of resetting the system to the first power level.

> The next two sentences of the paragraph cited above describe the operation as defined in claim 1 (though is slightly broader terms), and that provides 35 USC 112, first paragraph, support to claim 1 – which is not in question anyway.

> The fourth sentence of the paragraph in questions states that

>> Upon successful transmission of all RLC [sic] frames, the next transmission cycle can transmit a new set RLC frames based on the maximum acceptable FER, and so on.

Since the maximum acceptable FER corresponds to the minimum power that is used initially as long the RLC frames are transmitted successfully (see the second sentence of the paragraph in question) it follows that the above-quoted sentence is totally equivalent to a sentence that replaces "maximum acceptable FER" with "minimum power level."

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This is precisely what claim 2 defines by specifying a step of "resetting the power level to said first power level."

It is respectfully submitted that the above-cited paragraph and the remarks associated therewith provide clear evidence, *cumulative to the evidence provided in the previous Office Action response*, that claim 2 is in compliance with 35 USC 112, first paragraph, and the Examiner is respectfully requested to give serious consideration to each and every argument hereby submitted.

Respectfully, the first sentence in the above-cited paragraph also provides direct support to claim 9, which associates the first power level with a preselected first targeted frame error rate.

As for claim 10, applicants respectfully direct the Examiner to the third sentence of the above-cited paragraph, which states

> The RLC frames not successfully transmitted at the initial power level or any other power level can be repeatedly retransmitted at incrementally higher power levels associated with successively lower FERs until all RLC frames in a particular transmission cycle are successfully received. (Emphasis supplied).

It is respectfully submitted that this sentence fully supports claim 10.

Claims 1, 2, 11, and 13 were rejected under 35 USC 103 as being unpatentable over Vanghi, US Patent 6,711,150 in view of Malkamaki, US Patent 5,563,895. This is a "cut and paste" repeat of a rejection made in the previous Office Action, and applicants again respectfully traverse.

Applicants argued that the Vanghi reference deals with collections of frames and that those collections don't have a fixed number of frames, which is contrary to the definition of a block. The Examiner responded that he disagrees. The reason given by the Examiner however, does **not** disagree with applicants' statement of fact, or conclusion based on the fact but, rather, states that

> applicant's arguments, directed to the number of frames in the block, are irrelevant because are directed to the unclaimed subject matter.

Respectfully, that is not correct. Claim 1 specifies

> generating frames-block *l* that includes k of said information frames where *i* is an integer index

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and it also specifies

> generating frames-block i+1 that includes said j frames of said block i
> that were not transmitted correctly, and k-j subsequent signal frames of
> said incoming signal frames.

From the above it is clear that the method of claim 1 specifies

- blocks,

- blocks are referenced by an index, i, and

- for at least for indices i and i+1 the blocks contain precisely k frames.

Since an index is a well established approach for referring to one item of a collection of items that are the same relative to some parameter of focus, meaning that index i applies to any value of i, and here the items are blocks, it follows that claim 1 specifies a method where all blocks are of length k. Thus, applicants' argument that is "directed to the number of frames in the block" is, indeed, directed to claimed subject matter.

Even if the Examiner were to wrongly argue that the extension of claim 1 from blocks i and i+1 to blocks generally is unacceptable, at least the Examiner should have addressed that point, rather than assert that applicants' claims are not directed to claimed subject matter. Moreover, if the Examiner were to wrongly argue that the extension of claim 1 from blocks i and i+1 to blocks generally is unacceptable, the Examiner would have to demonstrate that at least for some consecutive pair of blocks i and i+1 Vanghi teaches blocks that have an equal number of frames, k, and block i+1 has j frames that are repeats of the previous frame (i) and k-j that are newly transmitted frames. The Examiner has not made such a showing, and applicants respectfully submit that such a showing cannot properly be made.

Applicants also argued that in Vanghi the retransmit power, when a retransmission occurs, is

> set based on the length of the retransmission, i.e., the number of
> message frames that are retransmitted.

This is contrary to claim 1, which specifies the step of

> transmitting frames i+1 with a power level that is higher than the power
> level employed in the immediately previous step of transmitting,
> wherein frame-block i+1 contains at least those of said frames-block i
> that failed to be transmitted correctly.

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This step increases the power of the entire following block that is transmitted, regardless of how many frames of that following block are retransmissions, which is contrary to the fundamental feature of the Vanghi teachings. Yet, the Examiner appears to have simply ignored this argument in spite of applicants' remarks that

> This is a fundamental feature of the Vanghi teachings that finds no correspondence in the instant claims.

The Examiner, in effect, did recognize that Vanghi does not transmit blocks that are structured like blocks of claim 1, but the Examiner asserts Malkamaki teach a frame block combining the *j* incorrectly transmitted frames with subsequent incoming signal frames (combining new information and information for retransmission in one block), and that it would be obvious to combine the two. Applicants again traverse.

Applicants submitted technical reasons for why a skilled artisan would not combine the teaching of Malkamaki with those of Vanghi. In response, the Examiner's simply states that

> Both teachings are directed to wireless systems for transmission and retransmission of data blocks comprising several portions.

Respectfully, that is NOT a rebuttal of the <u>technical reasons set forth by the applicants</u>. Moreover, the Examiner's explanation is not dispositive, because just because two references are directed to wireless systems for transmission and retransmission does not *ipso facto* suggest that they could be combined. They could, for example, be diametrically opposed to each other.

To repeat and augment applicants' arguments, it is noted that the Vanghi reference deals with the transmission of messages. There is a mechanism for controlling transmission power *during* the transmission of message frames but, nevertheless, when the message is fully sent, some frames may turn out to have been not received correctly. At such times a new message is created, and send. First, the new message consists of the frames that were not received correctly. See, for example, col. 3, lines 41-43, which teach that

> The effective message length is the number of frames that are yet to be correctly received.

Second, the power level of the transmitted message is a function of the length of the message. See, for example, col. 3, lines 38-41, which teach that

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> At the beginning of each message transmission, the outer loop power
> control in the receiving stations calculates the power control set point
> used for inner loop power control based on the effective message
> length.

This is a fundamental aspect of the Vanghi operation, and it works. There is no hint,
suggestion, or reason to incorporate the totally different approach of claim 1 into the
Vanghi design, even if one were aware of it. In other words, even if the Malkamaki
reference were to teach the notion of block $i+1$ consisting of k frames, where k is also the
number of frames of block i, with j of frames being retransmissions of block i frames, a
skilled artisan would still not modify the Vanghi reference.

Moreover, it is respectfully submitted that Malkamaki does NOT teach the above
notion. The Examiner cited col. 8, lines 38-46, and this passage states:

> FIG. 4 presents a potential TDMA frame 21 for use in the system of the
> present invention, in which some of the frame slots have been reserved
> for the actual transmissions 22 and other for retransmissions 24. If
> needed the number of time slots reserved for various purposes can be
> changes. And if needed also some of the time slots of a frame may be
> reserved for acknowledgment of the opposite direction, i.e., for
> retransmission requests.

Clearly, this shows a reservation of time slots in each frame, and the reserved slots can be
used for various purposes, including retransmission. That means that the number of time
slots for new information is fixed at any one time, and is not a function of the number of
frames that need to be retransmitted. The number of time slots that may be used for
retransmission is also fixed, and is not a function of the number of frames that need to be
retransmitted. In short Malkamaki does not teach the frame arrangement of claim 1.
Hence, even if one were to combine Vanghi and Malkamaki (which, as argued above, no
skilled artisan would do) one would still not have the method defined by claim 1.

Based on the above, it is respectfully submitted that claim 1 is not obvious in view
of the Vanghi and Malkamaki combination of references.

Although claim 2 was rejected under 35 USC 103 in view of the Vanghi and
Malkamak, no explanation or justification was offered for this rejection, either in the
present Office Action or in the previous Office Action. Applicants respectfully submit
that claim 2 is not obvious in view of the Vanghi and Malkamaki references at least by
virtue of the claim's dependence on claim 1. Moreover, it is respectfully submitted that

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the limitation introduced by claim 2 is not present in either of the references. Should the Examiner choose to maintain this rejection, applicants respectfully request an explanation of same, and an opportunity to respond as a matter of right (i.e., no FINAL rejection).

Regarding claim 11, the Examiner asserts that Vanghi teaches using a targeted FER. It is correct that the Vanghi receiver computes a targeted FER and communicates that to the transmitter, but the targeted FER is based on the length of the messages. It is not altered as specified in claim 11, where

> if at least one error condition occurs, transmitting a second block of second frames at a second power level to target a second frame error rate..."

Therefore, for the reasons expressed above in connection with claim 1, which are applicable to claim 11, and for the above reason relative to the targeted FER, it is respectfully submitted that claim 11 is not obvious in view of the Vanghi and Malkamaki combination of references.

Claim 13 is believed not obvious in view of the Vanghi and Malkamaki references for the same reasons that claim 11 is not obvious in view of the Vanghi and Malkamaki combination of references.

There appears to be no specific statement regarding claim 3, 4, 6, 9, 10, 12, 15, and 18, but all of the Examiner's remarks refer only to to the Vanghi reference. Since these claims depend on other claims that were rejected under 35 USC 103 in view of the Vanghi and Malkamaki combination of references, it is presumed that these claims are also rejected over Vanghi and Malkamaki combination of references. Correspondingly, it is respectfully submitted that these claims are not obvious in view of the Vanghi and Malkamaki combination of references at least because of their dependence on claims that are not obvious in view of this combination of references.

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In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's rejections have been overcome. Reconsideration and allowance are respectfully solicited.

Dated: _11/20/06_

Respectfully,
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